Unit in mm

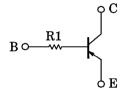
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# RN2970, RN2971

SWITCHING, INVERTER CIRCUIT, INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATIONS.

- Including Two Devices in US6 (Ultra Super Mini Type with 6 leads)
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process
- Complementary to RN1970~RN1971

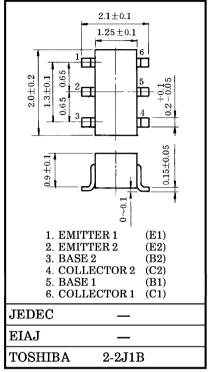
# **EQUIVALENT CIRCUIT**



## MAXIMUM RATINGS (Ta = 25°C) (Q1, Q2 COMMON)

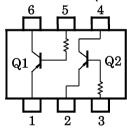
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$v_{CBO}$	-50	V
Collector-Emitter Voltage	$v_{CEO}$	-50	V
Emitter-Base Voltage	$v_{ m EBO}$	-5	V
Collector Current	$I_{\mathbf{C}}$	-100	mA
Collector Power Dissipation	$PC^*$	200	mW
Junction Temperature	$T_{j}$	150	°C
Storage Temperature Range	$\mathrm{T_{stg}}$	-55~150	°C

\* : Total Rating



Weight: 6.8mg

## **EQUIVALENT CIRCUIT (TOP VIEW)**



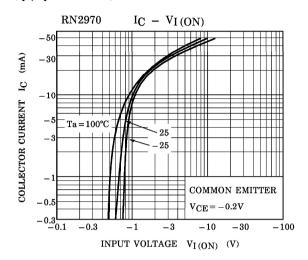
### ELECTRICAL CHARACTERISTICS (Ta = 25°C) (Q1, Q2 COMMON)

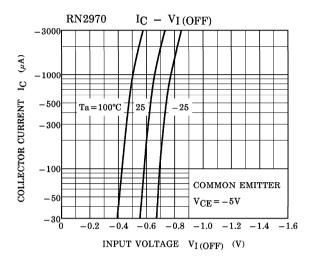
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{\mathrm{CBO}}$	$V_{CB} = -50V, I_{E} = 0$	_		-100	nA
Emitter Cut-off Current		$I_{ m EBO}$	$V_{EB} = -5V, I_{C} = 0$	_		-100	nA
DC Current Gain		${ m h_{FE}}$	$V_{CE} = -5V$ , $I_{C} = -1mA$	120		400	
Collector-Emitter Saturation Voltage		V <sub>CE</sub> (sat)	$I_{C} = -5 \text{mA}, I_{B} = -0.25 \text{mA}$	_	-0.1	-0.3	V
Transition Frequency		${ m f_T}$	$V_{CE} = -10V, I_{C} = -5mA$		200	_	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB} = -10V, I_{E} = 0, f = 1MHz$	_	3	6	рF
Input Resistor	RN2970	R1		3.29	4.7	6.11	1-0
	RN2971		_	7	10	13	$\mathbf{k}\Omega$

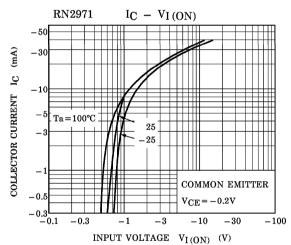
961001EAA2

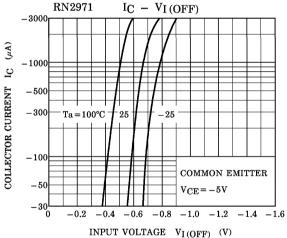
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### (Q1, Q2 COMMON)





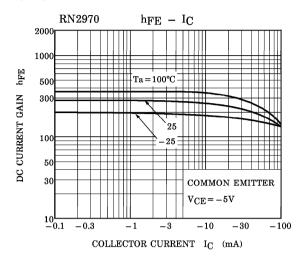


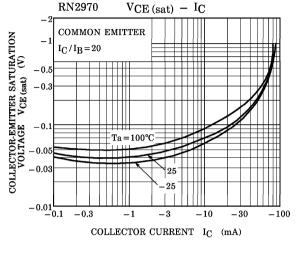


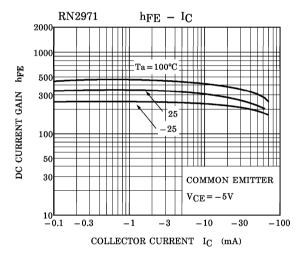
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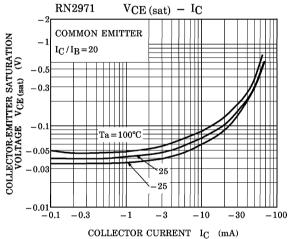
The information contained herein is subject to change without notice.

## (Q1, Q2, COMMON)









TYPE NAME	MARKING	
RN2970	Type Name YY K	
RN2971	Type Name  YY M	